LEED During Planning Charettes & Code 3 Activities

Devote the time and thought needed here or you will have to swim upstream later!!

Current Requirements Review (Army)

- All vertical new construction/major renovation & repair – LEED Silver (min 33 points)
- Includes tenant organizations (SOF, DoD)
- Horizontal construction – exempt from Silver but not from LEED
- Buildings not climate controlled – exempt from Silver but not from LEED (human comfort)
- Minor renovation & repair - exempt from Silver but not from LEED
- Mandatory 50% waste diversion
- EPAct mandatory 30% energy reduction (all federal agencies)
- Certifiable - “Able to achieve USGBC certification if submitted”
- AFH & RCI still SPIRIT “Gold” pending Army adoption of LEED Homes

Planning Charettes and Performance RFPs

- Still need to go through the same process when performance RFP is anticipated
  - Generate and use theoretical building footprints
  - Generate and use theoretical site plan
- Army Standard designs: get building footprint from COS, coordinate theoretical site plan with COS

Even when RFP may not mandate or show building or site plans, this is a critical reality check and funding exercise

Planning Charette

- MOST CRITICAL TIME to address **big picture issues** for the Installation that relate to LEED
  - Long-range plan for meeting renewable energy mandate
  - Traffic/mass transit/parking issues
  - Pedestrian circulation system/sidewalks
  - Density/future development issues
  - Habitat/environmental land set-asides
  - Renovation versus new construction

Planning Charette

- MOST CRITICAL TIME to capture **funding** needed for certain LEED credits
  - Rainwater collection structures
  - Stormwater control structures
  - Central energy plant, fuel cell
  - On-site renewable energy features (pv, solar, wind, geothermal)
  - Deconstruction, relocation, demolition
  - Porous pavement

Capture Supporting Facilities line items!!

Planning Charette

- Consider LEED when establishing site location and site boundaries
  - Proximity to wetlands, waters, 100 yr flood elevation
  - Proximity to basic services, bus stops
  - Sidewalks to basic services
  - Need larger site for parking shade islands
  - Need larger site for habitat restoration area
  - Need room for on-site stormwater retention, rainwater collection structures
  - Need room for on-site renewable energy features if planned

Planning Charette

- Get the **RIGHT INSTALLATION PLAYERS** at the charette to address LEED issues
  - Energy management (renewable energy)
  - Traffic/mass transit
  - Environmental
  - Master Planning
  - User
  - COS if applicable
- Request info/input/participation in advance of the charette

USACE LEED-NC Implementation Guide

Appendix A

- Identifies Installation role in each credit

LEED Credit Paragraph	LEED 2.2 Army Credit Guidance	Required - Preferred - Awards	Installation Primary Responsibility - Support Responsibility	
PAR	FEATURE			REMARKS
CATEGORY 1 - SUSTAINABLE SITES (14 POSSIBLE POINTS)				
SSPR1	Construction Activity Pollution Prevention (PREREQUISITE)	Rqd		All LEED prerequisites are required to be met. Related to compliance with 40 CFR 122.26 (Clean Water Act).
SS1	Site Selection		Prim	Credit is determined by Installation's site selection. Installation provides all necessary site data to support documentation of this credit.

USACE LEED-NC Implementation Guide Appendix A

- Includes commentary on issues to consider for each credit
- Quick reference to take to charette

SS4.3	Alternative Transportation: Low Emitting & Fuel Efficient Vehicles - OPTION 1		Spt	Requires provision of vehicles, which cannot be purchased with construction funds. To earn this credit option, Installation must provide vehicles.
SS4.3	Alternative Transportation: Low Emitting & Fuel Efficient Vehicles - OPTION 2			Credit is easily earned at minimal first cost.
SS4.3	Alternative Transportation: Low Emitting & Fuel Efficient Vehicles - OPTION 3		Spt	Requires provision of vehicle refueling stations. Installation must support type of fuel and commit to maintaining/supporting refueling stations.
SS7.1	Heat Island Effect: Non-Roof		Spt	Provision of shade islands requires larger area for parking and must be considered in determination of site boundaries. Cost of pervious pavement must be identified and funded in programming.

LEED-NC Application Guide for Multiple Buildings and On-Campus Projects (AGMBC)

- Consolidated parking lots
- Consolidated open space instead of adjacent to building
- Group average instead of individual on-site renewable energy
- Central chilled water system CFC phase-out plan for refrigerant management

Charette Report

- Include completed LEED Project Checklist indicating the points to be earned
  - Do not use the “?” block on the LEED checklist except for possible points beyond the minimum requirement – generate a specific point strategy and ensure site and budget coordinate with it
- Include narrative/commentary on special features related to individual points included to capture thought process & intent

Funding/DD1391 Preparation – Primary Facility

- Army/USACE guidance (27 April 07 ACSIM memorandum), beginning FY09:
  - Add default 2% separate line item “SDD & EPAct05” to Primary Facility (cat code 00005)
  - If multiple Primary Facilities, provide separate sub-line item for each facility
- This line item covers the added cost of going from LEED Certified to LEED Silver for the facility
- Do not add for exempt (non-climate controlled) facilities
- If cost add is expected to exceed 2%, provide explanation in Block 10 (Description of Proposed Construction) describing special features

Funding/DD1391 Preparation - Supporting Facilities

- Include SDD site features as line item costs under Supporting Facilities
- If SDD site feature causes Supporting Facilities to exceed target of 25% of Primary Facility, make it a sub-line item under the "SDD & EPACT" Primary Facility line item and describe in Block 10 Description of Construction.

Devote the time and thought to develop a real strategy and include the funding for it!!

Code 3/Parametric Estimate

- CRITICAL ACTIVITY - Last chance to review and validate project scope and to correct 1391 before funds are locked
- Parametric Estimate (3086): same guidance as DD1391 (default 2% separate line item “SDD & EPAct05” to Primary Facility) except:
  - If cost add is expected to exceed 2%, submit Sustainable Cost Template filled in to show costs for all points and cost delta between Certified and Silver
  - Sustainable Cost Template is not required except when Certified-to-Silver cost delta exceeds 2%
  - Find template at hot link through archived ECB 2006-2 (all ECBs are at wbdg.org/ccb) http://www.wbdg.org/ccb/browse_archive.php?o=31&c=214

Sustainable Cost Template

Put cheap/free points in the Certified column (you get no extra $ $ for them)

Facility Points Summary

Item No 1 (COL -1)	Sustainable Sites (SS) (COL-2)	Max Points (COL-3)	Points for Certified (COL-4)	Extra Points for Silver (COL-5)
SS Preq 1	Construction Activity Pollution Prevention	[Pre-Requisite]		
SS Credit 1	Site Selection	1		
SS Credit 2	Development Density & Community Connectivity	1		
SS Credit 3	Brownfield Redevelopment	1		
	Alternative Transportation			
SS Credit 4.1	Public Transportation Access	1		
SS Credit 4.2	Bicycle Storage & Changing Rooms	1		
SS Credit 4.3	Low-Emitting and Fuel-Efficient Vehicles	1		
SS Credit 4.4	Parking Capacity	1		
	Site Development			
SS Credit 5.1	Protect or Restore Habitat	1		
SS Credit 5.2	Maximize Open Space	1		
	Stormwater Design			
SS Credit 6.1	Quantity Control	1		
SS Credit 6.2	Quality Control	1		
	Heat Island Effect			
SS Credit 7.1	Non-Roof	1		
SS Credit 7.2	Roof	1		
SS Credit 8	Light Pollution Reduction	1		
	CATEGORY SUBTOTAL	14	0	0

Sustainable Cost Template

- Put cost for Silver points on right side
- Indicate cost category
- Indicate payback if known

Cost Increase (Decrease) To Achieve LEED Silver Rating (1/)						
Increased Design Cost for Silver (COL-6)	Increased/Decreased Construction Cost				DD1391 Cost Category (Suggested) 4/ (COL-11)	Annual Saving & Simple Payback Period if Known
	Suggested UOM 2/ (COL-7)	QTY (COL-8)	UC (COL-9)	Total Cost 3/ (COL-10)		
	LS				S-SI	
	-					
	-					
	Spaces				S-SI/ WBS-9	
	-					
	Spaces/SY				S-SI	
	SY/CY				S-SI	
	(SF)					
	GPD/LS				S-SD	
	GPD/LS				S-SD	
	(SY/LS)				S-SI	
	SF/LS				WBS-3	Potential Savings
	(FC/LS)				S-SE	
0				0		

Sustainable Cost Template

Summarize Primary Facility delta costs

If exceeds the 2% default, use this number instead on 3086

Sustainable Cost Summary							
Primary Facility SDD Cost				Cost Category from Col. # 11			
Substructure				WBS-1			
Superstructure				WBS-2			
Exterior Closure				WBS-3			
Roofing				WBS-4			
Interior Construction				WBS-5			
Interior Finishes				WBS-6			
Conveying System				WBS-7			
Plumbing				WBS-8			
HVAC				WBS-9			
Fire Protection Systems				WBS-10			
Electric Power & Lighting				WBS-11			
Electrical Systems				WBS-12			
Equipment				WBS-13			
Furnishings				WBS-14			
Special Construction				WBS-15			
	TOTAL PRIMARY FACILITY SDD COSTS =						

Sustainable Cost Template

Support Facility SDD Cost	Cost Category from Col. # 12
Electric Svc	S-SE
Water Sewer Gas	S-WSG
Steam/Chilled Water Distribution	S-SCW
Paving Walks Curbs Gutters	S-PWC
Storm Drainage (Code S-SD)	S-SD
Site Imp., Demo (Code S-SI)	S-SI
TOTAL SUPPORT FACILITIES SDD COSTS =	

- Summarize Support Facility delta costs
- Always include this cost as Support Facilities line item(s)
- Last page of the Sustainable Cost Template has instructions on how to fill it out
  - Include Contractor OH and Profit, do not include contingency or SIOH
- Sustainable Cost Template is required to be submitted with 3086 only if Primary Facility cost delta exceeds the 2% default

Questions, Feedback

- Planning Charettes
- Code 3/Parametric Estimate
- Sustainable Cost Template